UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1
T, SUITE 1100
TTS 02114-2023

United States, the Commonwealth of Massachusetts and Connecticut v. The General Electric Company (D. Mass.)
Consent Decree
APPENDIX C

ormation Attached

Memorandum

Date: July 12, 1999

Subject: Request for Removal Action at the Allendale School, GE–Pittsfield/Housatonic River Site, Pittsfield, Massachusetts–**Action Memorandum**

From: Richard Cavagnero, GE Project Leader
Office of Site Remediation and Restoration

Through: Patricia L. Meaney, Director
Office of Site Remediation and Restoration

To: John P. DeVillars
Regional Administrator
EPA New England

I. Purpose

The purpose of this Action Memorandum is to request and document approval for the proposed removal action described herein pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") for the Allendale School portion of the GE–Pittsfield/ Housatonic River Site (the "Site"), Pittsfield, Massachusetts. The proposed removal action will mitigate the human health and environmental threats posed by the releases and threat of releases of polychlorinated biphenyls ("PCBs") and other hazardous substances at the Allendale School.

Consent Decree

This Action Memorandum has been prepared for a removal action planned to be performed by the General Electric Company ("GE") pursuant to a final Consent Decree. The Consent Decree will be lodged in U.S. District Court, United States, et al. v. General Electric Company (D.Mass.) ("Consent Decree"). The Consent Decree will memorialize an agreement to address releases and threats of releases of hazardous substances at the overall Site, including, but not limited to, the releases and threats of releases of hazardous substances addressed in this Action Memorandum. Following lodging of the Consent Decree, an Action Memorandum for the overall site, the Consent Decree, and other documents related to the Consent Decree will be subject to a period allowing for public comment.

Consent Decree, and other documents related to the Consent Decree will be subject to a period allowing for public comment.

A public comment period has already been held from May 6, 1999 through June 5, 1999 for this proposed removal action for the Allendale School Property as well as for certain other removal actions. EPA's consideration of and response to the comments received are to be included as attachments to the Consent Decree upon lodging.

For the Allendale School removal action proposed in this Action Memorandum, the findings and determinations of this Action Memorandum will become effective upon signature of the EPA Regional Administrator.

II. Site Conditions and Background

CERCLIS ID #: MAD002084093
Site ID #: 0167

A. Site Description

1. Overall Site History

GE has operated a large-scale industrial facility in Pittsfield, Massachusetts since the early 1900's. The primary industrial activities at the Pittsfield facility included manufacturing and servicing of power transformers, defense and aerospace (ordnance), and plastics. Currently, GE's World Headquarters for Plastics is located at this facility, the defense and aerospace division was sold (General Dynamics Corporation is currently operating in the defense and aerospace portion of the former GE complex), and the transformer division is closed.

Although GE performed many functions at the Pittsfield facility throughout the years, the activities of the Transformer Division were one likely source of PCB contamination. Briefly, GE's Transformer Division's activities included the construction and repair of electrical transformers utilizing dielectric fluids, some of which contained PCBs (primarily Aroclors 1254 and 1260). GE manufactured and serviced electrical transformers containing PCBs at this facility from approximately 1932 through 1977.

The Allendale School Property History

The Allendale School was constructed in 1950 and 1951. At the time of construction, GE entered into an agreement which allowed the City of Pittsfield to remove soil material from GE property for use as fill material at the school property. The agreement indicated that the fill material placed at the Allendale School property originated from the Hill 78 area located south of the school property. Concerns regarding the potential presence of PCBs at the Allendale School property

were initially raised by the Massachusetts DEP during the construction of the U.S. Generating Company facility (formerly known as Altresco Corporation Cogeneration Facility), located at the Hill 78 area. Due to the presence of PCBs in soil at this area, the potential existed for PCBs to be present in the fill at the Allendale School property. As a result, the Massachusetts DEP conducted soil sampling at the Allendale School property in January 1990 and found detectable levels of PCBs in the soil. At the Massachusetts DEP's request, GE then conducted additional soil sampling at the Allendale School property between April and September 1990 to characterize the extent of PCBs at the property.

In the meantime, two Administrative Consent Orders (ACOs) were executed by GE and the Massachusetts DEP effective in May and July 1990, respectively. These ACOs cover all areas of the overall Site, including the Allendale School. GE has performed numerous actions and investigations under the ACOs. The results of these actions and investigations are available in numerous documents, reports, letters, data packages, and other submittals to the Massachusetts DEP, with copies provided to EPA. The submittals relevant to the Allendale School are included in the Administrative Record for this Action Memorandum.

In 1991, in response to soil sampling results collected by the Massachusetts DEP and GE, GE conducted an evaluation of various potential remedial options for the Allendale School property, and the Massachusetts DEP selected a capping option as a Short-Term Measure for the property. In accordance with the Massachusetts DEP's approval, GE then installed a 2-foot soil cap (with geotextile) over much of the playground area. In addition, in1998, some soil in the top three feet outside the existing soil cap was found to contain PCBs exceeding 2 ppm and was removed by GE (see Section II.B. Other Actions to Date).

On September 25, 1997, pursuant to Section 105 of CERCLA, 42 U.S.C. § 9606, EPA proposed the overall Site for inclusion onto the National Priorities List (NPL). The Site has received a Hazard Ranking System score of 70.71.

In October 1997, EPA, in combination with the United States Department of Justice, the Commonwealth of Massachusetts, the State of Connecticut, the City of Pittsfield and State (both Massachusetts and Connecticut) and Federal Natural Resource Trustees, formed an intergovernmental team and, with the assistance of a mediator, initiated negotiations with GE. In October 1998, the parties reached an agreement-in-principle that included a comprehensive cleanup of the overall Site, the redevelopment of portions of the GE facility, and a settlement of Natural Resource Damages claims. Mediated negotiations are in progress to memorialize the agreement in a Consent Decree, as referenced above.

2. Removal Site Evaluation

The Removal Site Evaluation for the Allendale School consisted of a review of the existing reports submitted by GE, and information gathered by EPA personnel during site visits and

meetings with the MA DEP and with GE over the past several years. A brief description of the Allendale School subject to this proposed removal action and a summary of the contamination is presented in Section 3.

3. Physical Location and Site Characteristics

The overall Site consists of the 254-acre GE facility; the Housatonic River, riverbanks, and associated floodplains beginning at the Newell Street bridge in Pittsfield, Massachusetts, and extending downstream to the extent of contamination; former river oxbows in Pittsfield that have been filled (including certain commercial properties located at and adjacent to these former oxbows); the Allendale School property; Silver Lake (a 26-acre Commonwealth of Massachusetts designated Great Pond) and its associated banks; and Unkamet Brook and its associated floodplain. With the exception of the downstream portion of the Housatonic River and its floodplains, the Site is located in a densely populated area of Pittsfield consisting of industrial, commercial, recreational, and residential properties.

The Allendale School Property is located to the north of the GE facility across Tyler Street Extension, and is bordered on the other three sides by residential areas. The school building occupies approximately 40,000 square feet within a property approximately 12 acres in size.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or, Pollutant or Contaminant

The primary contaminants of concern are PCBs. PCBs are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). PCBs are present in levels as high as 1,100 parts per million ("ppm") underneath the 2-foot soil cap currently present at the Allendale Schoolyard. Therefore, a release into the environment of hazardous substances has already occurred.

Other hazardous substances as defined by Section 101(14) of CERCLA that have been released at the Allendale School portion of the Site include, at the highest detected concentrations indicated in parentheses: benzo(a)anthracene (15 ppm), benzo(a)pyrene (16 ppm), benzo(b)fluoranthene (14 ppm), benzo(k)fluoranthene (12 ppm), chrysene (16 ppm), dibenzo(a,h)anthracene (2.5 ppm), indeno(1,2,3-cd) pyrene (3.8 ppm), phenanthrene (12 ppm), pyrene (20 ppm), dioxin (0.0016 ppb-2,3,7,8-TCDD only), and lead (60.1 ppm).

5. NPL Status

As stated above, EPA proposed the overall Site for inclusion onto the NPL on September 25, 1997. As part of the proposed Consent Decree with GE, EPA has agreed to defer a final decision on the proposed listing subject to certain conditions, including GE's successful implementation of this and other response actions.

B. Other Actions to Date

GE has performed two short-term measures at the Allendale School (also referred to as immediate response actions) pursuant to the State ACO, as follows:

- The installation of a temporary two-foot soil cover over approximately 5 acres.
- The subsequent excavation and off-site disposal of approximately 1,600 cubic yards of contaminated soil located outside the temporary soil cover at Allendale School.

C. State and Local Authorities' Roles

As mentioned above, the Massachusetts DEP and the City of Pittsfield have been extensively involved with negotiations regarding the proposed removal action specified in this Action Memorandum. MA DEP and the City of Pittsfield have been consulted and concur with and support EPA's proposed action, as indicated by correspondence included in the Administrative Record.

III. Threats to Public Health or Welfare or the Environment

As described below, the conditions at the Allendale School portion of the Site meet the general criteria for a removal action, as set forth in 40 C.F.R. § 300.415(b)(1), in that "there is a threat to public health or welfare of the United States or the environment", and in consideration of the factors set forth in 40 CFR § 300.415(b)(2) as described below.

- **"Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants" [300.415(b)(2)(i)].**

Potential exposure to nearby humans from contaminated soil.

In parts or all of the Allendale School property, there is the potential for future direct contact with hazardous substances in soils. Access is unrestricted and the school property is currently used for recreation. Zoning of the property would also allow for and thus provide the potential for future residential use of the property. There are no permanent institutional controls such as deeded environmental restrictions to prevent residential use or to protect the existing cap. Therefore, the potential exists for residents, school children, recreational users, workers, and trespassers to come in contact with contaminated soil in the future. Direct contact with contaminated soil could result in the ingestion, inhalation and/or dermal adsorption of hazardous substances.

The human health effects of some of the hazardous substances present in contaminated soil at the Allendale School portion of the Site are presented below.

PCBs

The concentrations of PCBs present at the Allendale School portion of the Site exceed or have the potential to exceed standards and cleanup levels considered protective of public health including: the Massachusetts Contingency Plan Method 1 default standard of two ppm for both residential and industrial soils; EPA's PCB Spill Cleanup Policy, 40 CFR Part 761, (10 ppm in residential areas— if capped); and the preliminary remediation goals (1 ppm for residential areas) specified in EPA OSWER Directive 9355.4-01.

Numerous studies on the health effects of PCBs have been performed. Studies of workers exposed to PCBs suggest that PCBs can cause skin irritations, such as acne and rashes, and cause irritation of the nose and lungs. Other reported human health effects include general weakness, respiratory symptoms, altered immune response, and damage to the liver. There are also studies which have reported neurological, behavioral, and developmental abnormalities in children born to mothers who ate PCB-contaminated fish. However, in these studies, the mothers' exposures to PCBs were estimated and not measured directly.

PCBs have been shown to produce a wide variety of adverse effects in many test animals, including severe acne, liver, stomach and thyroid damage, and reproductive and developmental effects. Monkeys, which are physiologically more similar to humans than other animals, have developed adverse immunological and neurological effects, as well as skin and eye irritations after being fed PCBs. PCBs may cause similar health effects in people.

PCBs have also been found to cause cancer in animals. Based on the animal studies, the United States Department of Health and Human Services has determined that PCBs may reasonably be anticipated to be human carcinogens. Similarly, EPA classifies PCBs as a probable human carcinogen, and the International Agency for Research on Cancer has determined that PCBs are probably carcinogenic to humans.

Therefore, exposure to the high levels of PCBs present at the Site could increase both the cancer risk and non-cancer risk to area residents, workers, recreational users and trespassers.

Non-PCB Hazardous Substances

Further characterization of non-PCB hazardous substances present at the Allendale School portion of the Site has been performed as part of the pre-design activities in support of the proposed removal action. Based on the sampling completed to date, there are also non-PCB hazardous substances present in soils at the Allendale School portion of the Site. Some of the more toxic compounds detected in soils subject to the proposed removal actions and their potential effects to human health are:

Lead

Exposure can occur through inhalation of dust and ingestion of soil. Ingestion of lead by small children may cause a decrease in intelligence quotient (IQ) scores and reduced growth. Lead exposure in adults may decrease reaction time and possibly affect memory. At high levels of exposure, lead can severely damage the brain and kidney in adults or children. Lead exposure may have effects on reproduction and women who are pregnant, if exposed to lead, may have premature births, smaller babies, or miscarriages.

Dioxin

Dioxin has a tendency to persist in the environment. It can bind to soil particles and bioaccumulate in the food chain, especially in fish. Dioxin in contaminated soils can enter the human body through ingestion, inhalation, and dermal adsorption.

Human exposure to very high levels of dioxin causes chloracne and is suspected of causing liver impairment. EPA considers dioxin to be a possible human carcinogen. Dioxin also has been shown to cause biochemical alterations; thyroid, reproductive and immune toxicity; and cancer in animals. Dioxin may cause similar effects in people.

Other Probable Human Carcinogens present in soils at the Site

The following hazardous substances present in soils at the Allendale School portion of the Site are classified by EPA as probable human carcinogens: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd) pyrene.

Summary of NCP Criteria for a Removal Action

The information presented above demonstrates that, pursuant to 40 C.F.R. 300.415(b)(1), the Allendale School portion of the Site presents a threat to public health or welfare or the environment based on consideration of the factors specified in 40 C.F.R. § 300.415(b)(2).

V. Proposed Actions and Estimated Costs

A. Proposed Actions

1. Proposed Action Description

The proposed Removal Action involves the excavation of all soils at the Allendale School property (including soils under the existing cap) in which PCBs have been detected at concentrations exceeding 2 ppm, except within an approximate 25-foot wide strip along the rear

portions of the school building, where (due to constructability issues) the soils shall be removed to achieve a PCB average of less than 2 ppm. It is estimated that approximately 30,000 cubic yards of soils exceed the 2 ppm cleanup level. Prior to excavating the contaminated soils, the clean soils in the temporary cap will need to be excavated and stockpiled; later they will be used as part of the backfill.

Approximately 25 % of the contaminated soils are below the water table, i.e. saturated. Some dewatering will likely be necessary in these areas to facilitate the excavation. Water from the dewatering operation will be taken by tanker truck to the GE Building 64 G treatment plant for treatment prior to discharge to the Housatonic River. The Building 64 G treatment plant discharge is regulated under a federal NPDES effluent discharge permit.

After excavation of the contaminated soils, the area will be backfilled with clean soil and restored to approximately its original condition. Certain modifications to the recreational areas will be made pursuant to agreements between GE and the City of Pittsfield.

The PCB cleanup level of 2 ppm is protective of human health and the environment. An average of 2 ppm is the default cleanup standard for PCBs under the Massachusetts Contingency Plan (MCP). This standard has been applied throughout the Commonwealth of Massachusetts and applied to numerous residential properties in Pittsfield which received fill containing GE waste in the ongoing cleanup of those properties by GE. The cleanup at Allendale will actually be more protective than the MCP standard since that standard would allow for an average of 2 ppm PCBs whereas the Allendale cleanup will remove all soils which exceed 2 ppm PCBs on a discrete sample basis (with the exception of the 25-foot strip along the rear of the school building).

Pre-design sampling has demonstrated that the other hazardous substances present at the Allendale School property at levels of potential concern are co-located with the PCBs and will therefore be excavated and removed along with the PCBs.

The contaminated soils generated during the performance of the Allendale School removal action will be temporarily stored at either the Hill 78 Consolidation Area (for PCBs less than 50 ppm) or the Building 71 Consolidation Area (for PCBs greater than 50 ppm). GE estimates that approximately 25,000 cubic yards of soil contain PCBs at less than 50 ppm. Approximately 5000 cubic yards of soil contain PCBs at greater than 50 ppm and are regulated by the Toxic Substances Control Act (TSCA). The TSCA office of EPA New England has made a finding that this temporary storage is protective of public health and the environment and will comply with applicable requirements under TSCA for temporary storage.

The ultimate disposition of these excavated soils will be determined in a subsequent Action Memorandum to be issued by EPA concurrently with the lodging of the Consent Decree. As noted previously, EPA has proposed and solicited public comment on its plan to consolidate the excavated soils from Allendale School and the excavated soils and sediments from the streambed

and banks of the 1/2 mile Upper Reach of the Housatonic River at the GE Plant Site in 2 or 3 consolidation areas. EPA has received a number of public comments on this proposal and is considering those comments before finalizing its decision. The issues involving those consolidation areas, including use of liners, capping materials, groundwater and air monitoring, will be addressed in the subsequent Action Memorandum, which will include a Responsiveness Summary of the major comments received and EPA's responses to those comments. To date, EPA has not received any public comment in opposition to the removal action for the Allendale School property.

This Action Memorandum is limited to the excavation of the soils at the Allendale School and the temporary storage of the excavated soils at the GE Plant site.

Post-Removal Site Control

There will not be any need for post-removal site control (PRSC) as defined in Section 300.415(l) of the NCP, since all contaminated soils above protective levels will be excavated and removed from the property.

2. Contribution to Remedial Performance

No additional remedial activities are expected to be performed at the Allendale School. As indicated previously, a subsequent Action Memorandum to be issued concurrently with lodging of the Consent Decree will provide for a number of other Removal Actions to address the other areas of the overall Site. EPA and GE are also studying the need for, and the extent of, remedial actions in the Rest of the River (as defined by the Consent Decree). The proposed removal action at Allendale School will not interfere with any of the subsequent Removal Actions or with any possible remedial action for the Rest of the River.

3. Description of Alternative Technologies

No alternative technologies are anticipated to be used in this Removal Action, which is limited to excavation of contaminated soils. Consideration of alternative technologies for the excavated soils will be addressed in the subsequent Action Memorandum.

4. Engineering Evaluation/Cost Analysis ("EE/CA") or Equivalent

Section 300.415(b)(4) of the NCP states that whenever a planning period of six months exists before on-site activities must be initiated, and the lead agency determines a removal action is appropriate, the lead agency shall conduct an EE/CA or its equivalent.

Onsite activities must be initiated within the next month in order for the work to be carried out during the school vacation period. Thus, an EE/CA or its equivalent has not been conducted.

5. Applicable or Relevant and Appropriate Requirements of Other Environmental Laws (ARARs)

Appendix B to this Action Memorandum identifies the ARARs and EPA's determination of the applicability and practicability of complying with each ARAR. EPA's determination was based on the criteria set forth in 40 CFR § 300.415(j).

In addition to making the determination that this Removal Action complies with ARARs to the extent practicable, EPA Region I's Regional Administrator, by approving this Action Memorandum, is also making the necessary determination pursuant to the Toxic Substances Control Act, 40 CFR 761.61(c)(2), that the risk-based method for cleanup, management, and storage of PCB remediation wastes provided for in this Action Memorandum will not pose an unreasonable risk of injury to health or the environment.

40 CFR 761.61(c) requires that the following elements be submitted to EPA's Regional Administrator for approval:

- A summary of the nature of the contamination;
- A summary of the sample procedures used to characterize the Site;
- A summary of the location and extent of the identified contamination;
- A cleanup plan for the Site; and,
- A written certification that all sampling plans and procedures used to assess and characterize the Site are available for review.

40 CFR 761.61(c)(2) states that if the above-referenced summary, plans and certifications, etc., are submitted, "EPA [the Regional Administrator] will issue a written decision . . . for a risk-based method for PCB remediation wastes. EPA will approve such an application if it finds that the method will not pose an unreasonable risk of injury to health or the environment."

These summaries and cleanup plans have been submitted by GE in previous sampling and analytical plans, site investigation reports, and workplans, and are included in the Administrative Record, for which the index is provided in Appendix A to this Action Memorandum. By their inclusion in the Administrative Record for this Removal Action, they will be made available for public review at the Site Information Repositories located in Pittsfield, MA. and at EPA's Boston Office.

The basis for the determination that this Removal Action will not pose an unreasonable risk of injury to health or the environment is as follows:

The PCB cleanup level of 2 ppm is the default cleanup standard for PCBs under the Massachusetts Contingency Plan (MCP) applied to residential properties throughout the Commonwealth of Massachusetts. It has been applied to numerous residential properties in Pittsfield which received fill containing GE waste in the ongoing cleanup of those properties

by GE. The cleanup at Allendale will actually be more protective than the MCP standard since that standard would allow for an average of 2 ppm PCBs whereas the Allendale cleanup will remove all soils which exceed 2 ppm PCBs on a discrete sample basis with the previously noted exception of a small area adjacent the school building. Pre-design sampling has demonstrated that the other hazardous substances present at the Allendale School property at levels of potential concern are co-located with the PCBs and will therefore be excavated along with the PCBs.

6. Project Schedule

GE plans to begin the removal action for the Allendale School Property in mid July of this year. The project is estimated to take 6-8 weeks.

B. Estimated Costs

Since GE has agreed to perform these actions pursuant to a Consent Decree, this Action Memorandum does not include a request for funds for EPA to conduct the proposed removal actions. In accordance with 40 C.F.R. § 300.415(k), the 12-month and $2,000,000 statutory limits to removal actions do not apply to responsible party lead removal actions. Funding for EPA to oversee and monitor GE's performance will be required.

VI. Expected Change in the Situation Should Action be Delayed or Not Taken

Delayed or no action will result in a continuation of the human health and environmental risks by allowing for the continued potential for future direct contact, ingestion, inhalation and adsorption of PCBs and non-PCB hazardous substances by area residents, school children, trespassers, and workers.

VII. Enforcement — Intended for Internal Distribution Only

See attached.

VIII. Recommendation

This decision document represents the selection of certain removal actions at the Allendale School portion of the GE–Housatonic River Site, in Pittsfield, Massachusetts. The proposed removal action was developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision document is based on documents contained in the administrative record for the Site. (See Appendix A for the Administrative Record File Index and the List of Selected Key Guidance Documents.)

As stated in Section III, conditions at the Site meet the NCP §300.415(b)(2) criteria for removal actions in that there are:

- "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants" [300.415(b)(2)(i)];

The removal actions proposed in this Action Memorandum will abate, prevent, minimize, stabilize, mitigate and/or eliminate the release or threat of release of hazardous substances at the Allendale School portion of the Site. Therefore, I recommend your approval of this Action Memorandum.

Approval: _____ Date: 7/12/99
John P. DeVillars
Regional Administrator

Disapproval: _____ Date: _____
John P. DeVillars
Regional Administrator

Attachments:

Enforcement Strategy (Confidential)

Appendix A: Administrative Record File Index and Selected Key Guidance Documents

Appendix B: ARARs analysis

APPENDIX A

ADMINISTRATIVE RECORD INDEX
for
ALLENDALE SCHOOL REMOVAL

2.00 Removal Response

2.01 Correspondence

1. Title/Subject: Allendale School Property / Transmittal of Pre-Design Work Plan for Allendale School property.
   Addressee: Richard Cavagnero/Bryan Olson - Environmental Protection Agency
   Authors: Richard Gates - General Electric Company
   Date: March 12, 19999
   Format: Letter
   No. Pgs.: 1

2. Title/Subject: Allendale School Property / Transmittal of Tables 3 and 4 of the Pre-Design Work Plan for the Allendale School Property.
   Addressee: Richard Cavagnero/Bryan Olson - Environmental Protection Agency
   Authors: James M. Nuss, P.E., LSP - Blasland, Bouck & Lee, Inc.
   Date: March 16, 1999
   Format: Letter
   No. Pgs.: 5

3. Title/Subject: Review of "Pre-Design Work Plan for the Allendale School Property" / Pre-Design Work Plan Approval
   Addressee: Mr. Andrew T. Silfer, P.E. - General Electric Company
   Authors: Chester L. Janowski - Environmental Protection Agency
   Date: April 2, 1999
   Format: Letter
   No. Pgs.: 2

4. Title/Subject: Allendale School Property - Pre-Design Investigations / Revised proposal for soil borings.
   Addressee: Richard Cavagnero/Bryan Olson - Environmental Protection Agency
   Authors: Richard W. Gates - General Electric Company
   Date: April 13, 1999
   Format: Letter
   No. Pgs.: 3

5. Title/Subject: Allendale School - Pre-Design Investigations / Approval of Revised soil borings proposal.
   Addressee: Mr. Richard Gates - General Electric Company
   Authors: Chester L. Janowski - Environmental Protection Agency
   Date: April 14, 1999
   Format: Letter
   No. Pgs.: 1

6. Title/Subject: Allendale School Property - Pre-Design Investigations / Notification of start of pre-design investigations field work
   Addressee: Chester L. Janowski - Environmental Protection Agency
   Authors: Mr. Richard Gates - General Electric Company
   Date: April 16, 1999
   Format: Letter
   No. Pgs.: 1

7. Title/Subject: Allendale School - Pre-Design Investigations / Review of Pre-design Investigations.
   Addressee: Mr. Richard Gates - General Electric Company
   Authors: Chester L. Janowski - Environmental Protection Agency
   Date: May 7, 1999
   Format: Letter
   No. Pgs.: 2

8. Title/Subject: Allendale School - Pre-Design Investigations / Results from EPA split samples.
   Addressee: Mr. Richard Gates - General Electric Company
   Authors: Chester L. Janowski - Environmental Protection Agency
   Date: May 17, 1999
   Format: Letter
   No. Pgs.: 1

9. Title/Subject: Allendale School - Pre-Design Investigations / Results of pre-design investigations.
   Addressee: Richard Cavagnero/Bryan Olson - Environmental Protection Agency
   Authors: Mr. Richard W. Gates - General Electric Company
   Date: May 24, 1999
   Format: Letter
   No. Pgs.: 7

10. Title/Subject: Allendale School - Pre-Design Investigations / EPA approval of pre-design investigations.
    Addressee: Mr. Richard Gates - General Electric Company
    Authors: Chester L. Janowski - Environmental Protection Agency
    Date: May 27, 1999
    Format: Letter
    No. Pgs.: 2

11. Title/Subject: Allendale School Property / Submittal of Removal Design/Removal Action Work Plan for the Allendale School
    Addressee: Richard Cavagnero/Bryan Olson - Environmental Protection Agency
    Authors: Mr. Richard Gates - General Electric Company
    Date: June 8, 1999
    Format: Letter
    No. Pgs.: 1

12. Title/Subject: Allendale School Property / Clarifications and agreements to GE's Removal Design/Removal Action Work Plan for the Allendale School Property.
    Addressee: Richard Cavagnero/Bryan Olson - Environmental Protection Agency
    Authors: Mr. Richard W. Gates - General Electric Company
    Date: June 25, 1999
    Format: Letter
    No. Pgs.: 9

13. Title/Subject: Removal Design/Removal Action Work Plan for the Allendale School Property / EPA approval of GE's Removal Design/Removal Action Work Plan for the Allendale School Property.
    Addressee: Mr. Richard Gates - General Electric Company
    Authors: Chester L. Janowski - Environmental Protection Agency
    Date: June 29, 1999
    Format: Letter
    No. Pgs.: 2

14. Title/Subject: City of Pittsfield / Concurrence with proposed removal action.
    Addressee: John Kilborn - Environmental Protection Agency
    Authors: Gerald S. Doyle, Jr. - Mayor, City of Pittsfield, MA
    Date: July 8, 1999
    Format: Letter
    No. Pgs.: 1

15. Title/Subject: Temporary Soil Stockpiles - Allendale School / Request to temporarily store PCB soils at the Hill 78 or Building 71 areas.
    Addressee: Ms. Kimberly Tisa - Environmental Protection Agency
    Authors: Mr. Richard Gates - General Electric Company
    Date: July 9, 1999
    Format: Letter
    No. Pgs.: 3

16. Title/Subject: Allendale School - Site No. 1-0960 / State concurrence of the Allendale School Removal Action.
    Addressee: Richard Cavagnero - Environmental Protection Agency
    Authors: Alan Weinberg - Massachusetts Department of Environmental Protection
    Date: July 9, 1999
    Format: Letter
    No. Pgs.: 1

17. Title/Subject: Temporary TSCA Storage Location under §761.65(c)(9) / EPA approval of temporary storage of PCB soils at the Hill 78 or Building 71 areas.
    Addressee: Mr. Richard Gates - General Electric Company
    Authors: Kimberly N. Tisa - Environmental Protection Agency
    Date: July 12, 1999
    Format: Letter
    No. Pgs.: 2

2.03 Removal Response - Sampling and Analysis Data

1. Title: Follow-up Comments on May 3, 1999 Letter Report from GE to USEPA and MADEP Re: Allendale School Property - Pre-Design Investigations.
   Addressee: Chester L. Janowski - Environmental Protection Agency
   Authors: Cathy Schmidt - Roy F. Weston , Inc.
   Date: May 14, 1999
   Format: Comparison of split sample results to GE sample results.
   No. Pgs.: 3

11.00 Potentially Responsible Party (PRP)

11.09 PRP Specific Documents

1. Title: MCP Interim Phase II Report for the Allendale School Property
   Addressee:
   Authors: Blasland & Bouck Engineers
   Date: January 1993
   Format: Report

2. Title: MCP Supplemental Phase II Scope of Work for the Allendale School Property
   Addressee:
   Authors: Blasland, Bouck & Lee, Inc.
   Date: November 1996
   Format: Report

3. Title: MCP Supplemental Phase II Report for the Allendale School Property
   Addressee:
   Authors: Blasland, Bouck & Lee, Inc.
   Date: August 1997
   Format: Report

4. Title: Addendum to the MCP Supplemental Phase II Report for the Allendale School Property. Volumes I, II, III.
   Addressee:
   Authors: Blasland, Bouck & Lee, Inc.

	Date:	June 1998
	Format:	Report
5.	Title:	Pre-Design Work Plan for the Allendale School Property
	Addressee:	
	Authors:	Blasland, Bouck & Lee, Inc.
	Date:	March 1999
	Format:	Report
6.	Title:	Removal Design/Removal Action Work Plan for Allendale School Property
	Addressee:	
	Authors:	Blasland, Bouck & Lee, Inc.
	Date:	June 1999
	Format:	Report

Selected Key Guidance Documents

GE - Housatonic River Site
Allendale School Property
July 1999

EPA guidance documents may be reviewed at the EPA Region I's Superfund Records Center, 1 Congress Street, Boston, Massachusetts.

1. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601 et seq. January 1, 1980 [C018]

2. "Polychlorinated Biphenyls Spill Cleanup Policy", Federal Register. April 2, 1987. Vol. 52, No. 63 p. 10688-10710. [C069]

3. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Environmental Review Requirements for Removal Actions (OSWER Directive 9318.0-05), April 13, 1987. [1003]

4. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites (OSWER Directive 9200.4-26), April 13, 1998. [ ]

5. "Determining When Land Disposal Restrictions (LDRs) are Applicable to CERCLA Response Actions", (OSWER Directive 9347.3-05FS), July 1989. [2218]

6. "National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule", Federal Register. March 8, 1990. Vol. 55, No. 46, pp. 8758-8760. [C496]

7. Guidance on Remedial Actions at Superfund Sites with PCB Contamination. (OSWER Directive 9355.4-01) August 1, 1990. [2014]

8. Guidance on Remedial Actions at Superfund Sites with PCB Contamination. Quick Reference Fact Sheet (OSWER Directive 9355.4-01FS) August 1, 1990. August 1, 1990. [C254]

9. Superfund Removal Procedures Action Memorandum Guidance. (OSWER Directive 9360.3-01), September 1, 1990. [C263]

10. Superfund Removal Procedures: Guidance on the Consideration of ARARs During Removal Actions. (OSWER Directive 9360.3-02), August 1, 1991. [C183]

11. Superfund Removal Procedures: Public Participation Guidance for On-Scene Coordinators: Community Relations and the Administrative Record. (OSWER Directive 9360.3-05), June 1, 1992. [C285]

12. "Early Action and Long-term Action Under SACM (Superfund Accelerated Cleanup Model) - Interim Guidance.", (OSWER Directive 9203.1-051), December 1, 1992. [C185]

13. "SACM (Superfund Accelerated Cleanup Model) Regional Decision Teams - Interim Guidance", (OSWER Directive 9203.1-051), Vol 1. No. 5, December 1, 1992. [C371]

14. "Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA", (EPA 540-R-93-057), August 1, 1993. [C186]

15. "Determination of Imminent and Substantial Endangerment for Removal Actions", Bruce M. Diamond, U.S. Environmental Protection Agency Office of Waste Programs Enforcement, and Henry L. Longest II, United States Environmental Protection Agency Office of Emergency and Remedial Response, (OSWER Directive 9360.0-34; NTIS Number PB93-963416; PIC Number EPA 540-F-93-039), August 19, 1993. [C283]

16. Memorandum for Elliot P. Laws, Assistant Administrator, EPA HQ, Subject: Land Use in the CERCLA Remedy Selection process. January 1, 1995. (OSWER Directive No. 9355.7-04). [C317]

17. Memorandum from Michael Shapiro, Director, Office of Solid Waste, EPA HQ, Stephen D. Luftig, Director, Office of Emergency and Remedial Response, EPA HQ, and Jerry Clifford, Director, Office of Site Remediation Enforcement, EPA HQ, Subject: Use of Area of Contamination (AC) Concept During RCRA Cleanups. March 13, 1996. [C487]

18. U.S. Department of Health and Human Services. Public Health Service, Agency for Toxic Substances and Disease Registry. Toxicological Profile for Polychlorinated Biphenyls (Update), September 1, 1997. [C286]

19. U.S. Department of Health and Human Services. Public Health Service. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Chlorinated Dibenzo-p-Dioxins, Draft for Public Comment (Update), September 1997. [ ]

20. U.S. Department of Health and Human Services. Public Health Service. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Lead, Draft for Public Comment (Update), September 1997. [ ]

21. Memorandum from Dennis P. Gagne and Yoon-Jean Choi, EPA Region I, Subject: Alternative Cap Design Guidance Proposed for Unlined, Hazardous Waste Landfills in EPA Region I", September 30, 1997. [C495]

22. "Disposal of Polychlorinated Biphenyls (PCBs)", Final Rule, Federal Register, June 29, 1998, Vol. 63, No. 124, pp. 35383-35474. [C497]

23. "National Oil and Hazardous Substances Pollution Contingency Plan", Code of Federal Regulations (Title 40, Part 300), Revised as of July 1, 1998. [ ]

24. "Massachusetts Contingency Plan", Code of Massachusetts Regulations, 310 CMR 40.0000, May 29, 1998. [ ]

25. "Soil Remediation Goals for Sprague Electric Brown Street Site, North Adams, MA", Geraghty and Miller, Inc., June 3, 1992. [C494]

26. Kissel, J.;Shirai, JH; Richter, KY and Fenske, RA. 1998. Investigation of Dermal Contact with Soil using a Fluorescent Marker. Journal of Soil Contamination, 7(6): pp. 737-752. [C493]

27. PTI (PTI Environmental Services). 1993. Gastrointestinal Absorption of Selected Chemicals, Review of Evidence for Deriving Relative Absorption Factors. EPA Contract No. 68-WO-0032. July 1993. [C492]

28. USEPA. 1998 Integrated Risk Information Services System (IRIS). U.S. EPA Toxicological Database, Washington, DC. [ ]

29. Exposure Factors Handbook, Volumes I, II, and III. Office of Research and Development, Washington, DC. EPA/600/P-95/002Fa. August 1, 1997. [C356] [ ] [ ]

30. Health Effects Assessment Summary Tables (HEAST), FY-1997 Update, Office of Solid Waste and Emergency Response. Washington, DC. EPA-540-R-97-036. PB 97-921199. July, 1 1997. [C468]

31. Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. Office of Solid Waste and Emergency Response. Washington, DC. OSWER Directive 9285.6-03. March 25, 1991 [C219]

32. "Percutaneous Absorption of PCBs from Soil: In Vivo Rhesus Monkeys, In Vitro Human Skin, and Binding to Powdered Human Stratum Corneum", Ronald C. Webster, Howard I. Maiback, Lena Sedik et al. Journal of Toxicology and Environmental Health, January 1, 1993. Vol 24, No. 3. PP. 375-382. [C303]

33. "Role of Baseline Risk Assessment in Superfund Remedy Selection Decisions", Don Clay. April 22, 1991 (OSWER Directive 9355.0-30) [C276]

34. "PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures", Office of Research and Development, U.S. Environmental Protection Agency, EPA/600/P-96/001F, September 1, 1996. [C340]

ARARS FOR ALLENDALE SCHOOL REMOVAL ACTION
(Excluding ultimate and disposition of excavated materials)

GE-PITTSFIELD/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

Regulation	Citation	Requirements	Applicability/Appropriateness	Determination Re Attainment
Federal ARARs				

Regulation	Citation	Requirements	Applicability/Appropriateness	Determination Re Attainment
Toxic Substances Control Act (TSCA) Regulations re: PCB Remediation Waste	40 CFR 761.61	Establishes cleanup options for PCB remediation wastes, including PCB-contaminated soils. Options include risk-based approval by EPA. Parties seeking risk-based approval must demonstrate that cleanup plans will not pose an unreasonable risk of injury to health or the environment.	Applicable to soils with PCBs $\geq$ 50 ppm that were released into the environment prior to April 18, 1978 and to any PCB waste released after that date where original source was $\geq$500 ppm PCBs beginning on April 18, 1978, or $\geq$50 ppm PCBs beginning on July 2, 1979.	Will be attained. GE will conduct the Removal Action (including soil excavation) in accordance with the conditionally approved RD/RA Work Plan: EPA has determined that such Removal Action will not result in an unreasonable risk of injury to health or the environment.

TSCA Regulations (Temporary storage of PCB Remediation Waste)	40 CFR 761.65(c)(9)	Allows for the temporary storage of bulk PCB Remediation Waste subject to conditions regarding covers, liners, and run-on control.	Applicable to waste containing PCBs $\geq$ 50 ppm.	Will be attained for temporary storage, based on EPA determination in letter of July 12, 1999. (This ARAR applies only to the temporary storage of materials subject to TSCA at the Building 71 Consolidation Area. The ultimate disposition of these soils, including any ARARS associated with these soils, will be determined in a subsequent Action Memorandum.
TSCA Regulations (Decontamination)	40 CFR 761.79	Establishes decontamination standards and procedures for removing PCBs from non-porous sources.	Applicable to decontamination of equipment used during construction.	Will be attained. In conducting the Removal Action, GE will implement equipment cleaning techniques in accordance with Section 4.5.6. of RD/RA Work Plan, as conditionally approved, to comply with these requirements.
Clean Water Act NPDES Regulations (Stormwater Discharges)	40 CFR 122.26(c)(ii)(C) 40 CFR 122.44(k) 40 CFR 125.100-.104	Dischargers of stormwater associated with construction activities are required to implement measures, including best management practices, to control pollutants in stormwater discharges during and after construction activities.	Applicable to discharges of stormwater.	Will be attained. GE will implement erosion controls and stormwater management measures in accordance with Sections 4.4.5 and 4.6 of RD/RA Work Plan, as conditionally approved, to comply with these requirements.

Regulation	Citation	Requirements	Applicability/Appropriateness	Determination Re Attainment
Clean Water Act NPDES Regulations	33 USC 1342 40 CFR 122, esp. 122.44(a), (e) 40 CFR 125.100-.104 40 CFR 131	BAT effluent limits for toxic and non-conventional pollutants; BCT limits for conventional pollutants; water-quality based effluent limitations; best management practices to prevent release of toxics to surface waters from ancillary areas or spills.	Applicable to point source discharges of treated waters to River	Will be attained. Discharges of treated water from de-watering operations will be from GE's existing Ground-Water Treatment Facility (via NPDES-permitted outfall) and will meet same effluent limitations as in GE's existing NPDES permit.
Toxic Substances Control Act (TSCA) Regulations (Disposal of Discharge Water containing PCBs)	40 CFR 761.50(a)(3)	Prohibits discharge of water containing PCBs to navigable waters unless PCB concentration is < approximately 3 ppb or in accordanace with discharge limit of NPDES permit.	Applicable to discharge of treated waters to Housatonic from dewatering operations	Will be attained. Discharges of treated water from dewatering operations will be from GE's existing Ground-Water Treatment Facility (via NPDES-permitted outfall) and will meet same effluent limitations as in GE's existing NPDES permit.
RCRA Regulations (Identification and Listing of Hazardous Wastes; Toxicity Characteristics)	40 CFR 261.24	Identifies the concentrations of contaminants which, if present, are characteristic of hazardous waste due to toxicity. The analytical test set forth in Appendix II of 40 CFR Part 261 is referred to as the Toxicity Characteristic Leaching Procedure (TCLP).	Applicable.	Will be attained based on conservative screening evaluation presented in Section 3.5 of Work Plan, which indicates that no soils at this Property would constitute a RCRA characteristic hazardous waste under these regulations.
State ARARs				

Regulation	Citation	Requirements	Applicability/Appropriateness	Determination Re Attainment
Mass. Air Pollution Control Requirements	310 CMR 7.09	Prohibition against creating condition of air pollution in connection with dust generating activity.	Applicable to construction activities generating dust.	Will be attained by GE's implementing dust control measures and air monitoring in accordance with Sections 4.4.5, 4.4.6, and 4.5.5 of the conditionally approved RD/RA Work Plan.
Mass. Clean Water Act Regulations (Discharge Water Quality Standards)	314 CMR 3.10 314 CMR 3.19 314 CMR 4.04(1-2) 314 CMR 4.05(3)(b) 314 CMR 4.05(5)	State water quality standards for use in setting effluent limitations and other conditions for point source discharges.	Applicable to effluent limitations for discharge of treated water.	For effluent discharges, see discussion of Federal Clean Water Act NPDES regulations above.